Date:

Title: 11.3 Squares, Right Triangles, and Areas

Objective: To find and use areas of polygons to determine side lengths.

IN:

Using the LOYO homework, talk at your table group about your definitions and formulas of area and perimeter.

CLASS DEFINITIONS:

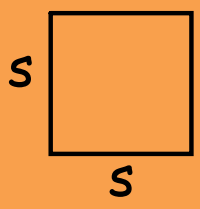
Area -

Perimeter -

Square

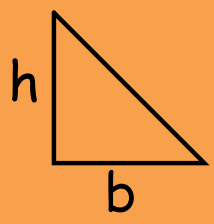
Area =

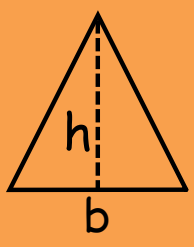
Perimeter =



Triangle

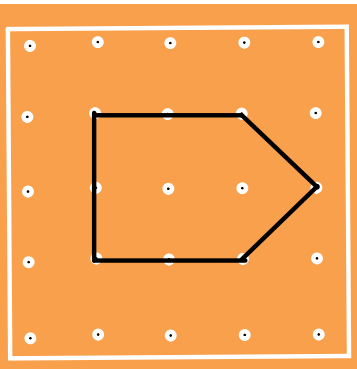
Area =

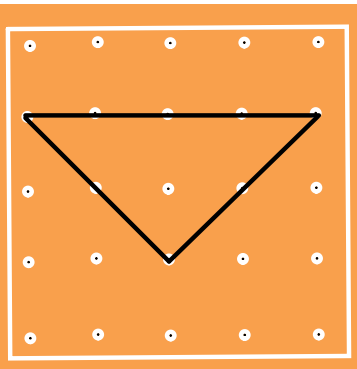




Will that formula work for this triangle?

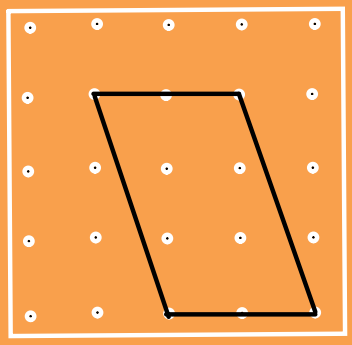
Copy the figures onto your geoboard or grid paper. Find the area of each polygon.

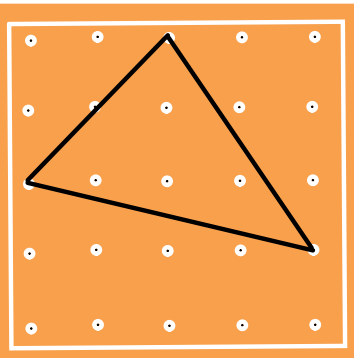




Be ready to explain your strategy to the class.

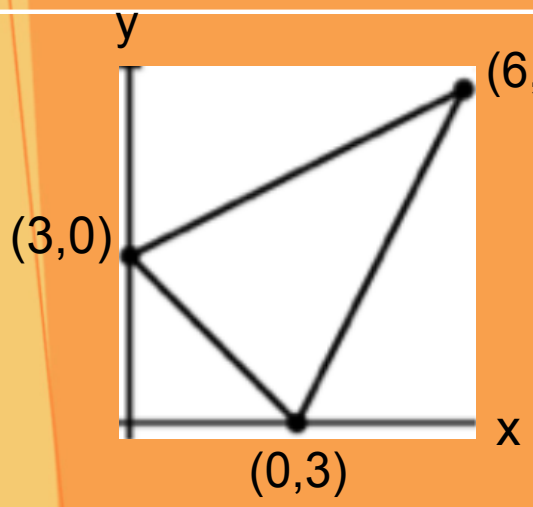
Find the area of each polygon.





Be ready to explain your strategy to the class.

Find the area of the big triangle.



(P) What do you see?

(A) What do you know?

(S) Why do we need to know how to do this problem?

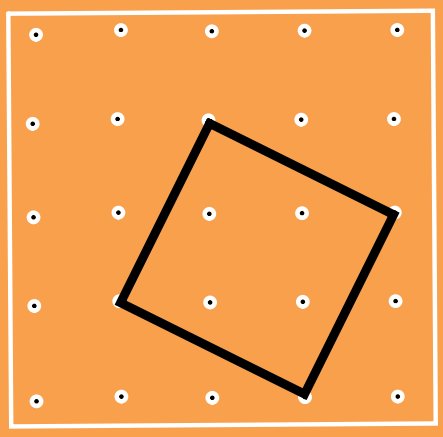
W2L:

To find the area of a triangle in a coordinate plane...

Copy the figure onto your grid paper.

Find the area of the black square.

Be ready to explain your strategy to the class.

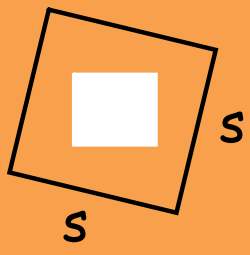


How can we use the area to find the length of one side of a square?

Talk at your table to come up with some ideas!

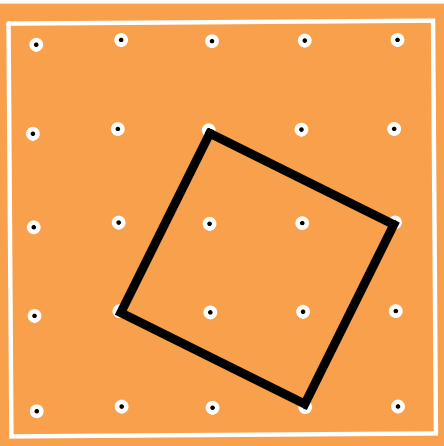
If you know the side length, ___, of a square, then the area of the square is ___.

If you know the area of a square is ____, then the side length is ____, or ____.

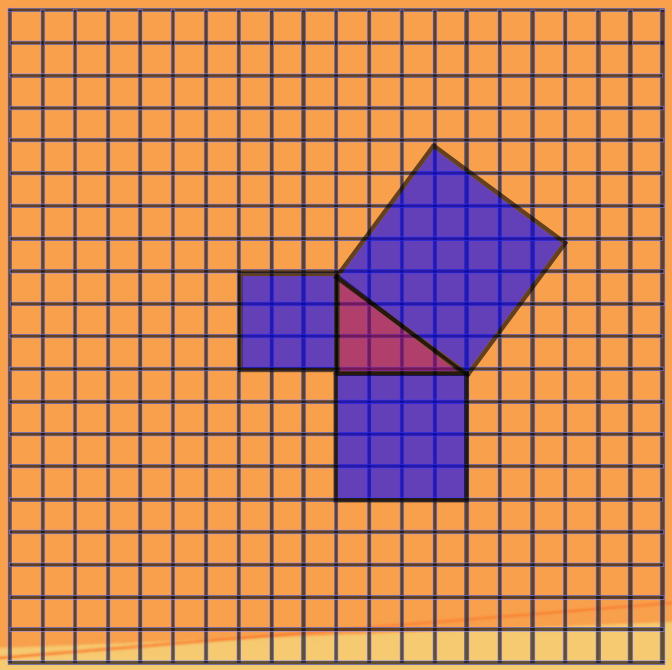


Using your square from before, find the length of each side.

What is the perimeter of the square?



Find the area of each of the 3 squares.
Find the lengths of each side of the triangle.



Find an exact solution for each equation.
(Do not use your calculator for these.)

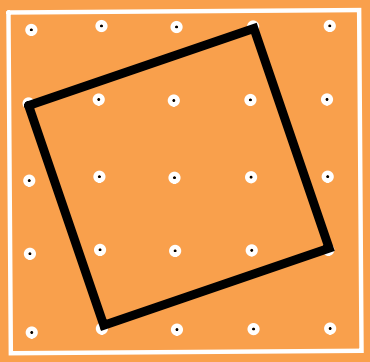
1. $x^2 = 47$

2. $(x - 4)^2 = 28$

3. $(x + 2)^2 - 3 = 11$

Summary: Describe how to find the side length of a square if you have the area.

Out: Find the area and perimeter of the square.



HOMEWORK: worksheet 11.3